

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

REC'D 06 MAY 2005

WIPO PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/US2004/036128

International filing date (day/month/year)
28.10.2004

Priority date (day/month/year)
03.11.2003

International Patent Classification (IPC) or both national classification and IPC
H04Q7/38, H04L12/56

Applicant
QUALCOMM INCORPORATED

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2004/036128

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2004/036128

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-50
	No: Claims	
Inventive step (IS)	Yes: Claims	1-50
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-50
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

Reference is made to the following documents:

D1: EP-A-1 294 212 (LUCENT TECHNOLOGIES INC) 19 March 2003 (2003-03-19)

D2: COVER T M: "BROADCAST CHANNELS" IEEE TRANSACTIONS ON
INFORMATION THEORY, IEEE INC. NEW YORK, US, vol. IT-18, no. 1,
January 1972 (1972-01), pages 2-14, XP000760860 ISSN: 0018-9448

1. The document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and shows (the references in parentheses applying to this document):
A method for processing data in a communication system, comprising: receiving indications of signal quality associated with a plurality of user stations (paragraph 6) and selecting a first user station and a second user station to receive data from a base station, based on the indications of signal quality (paragraph 7).

The subject-matter of claim 1 differs from D1 in that said method further comprises: constructing a first packet containing signaling data for the first user station and application data for the second user station; super-imposing a second packet upon the first packet, the second packet containing application data for the first user station; and transmitting the first and second packets simultaneously from the base station to the first and second user stations.

The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

The problem to be solved by the present invention may be regarded as how to improve the capacity of the system.

Even if documents like D2 disclose superimposing a second packet for a second user to a first packet for a first user and sending these two packets simultaneously, there is no identification neither in D1, D2 nor in any other document of carrying signaling information for a first user in a first packet and data information for said first user in

the second packet. Hence, said method does not appear obvious from the prior art. Therefore the subject-matter of claim 1 is considered as **involving an inventive step** (Article 33(3) PCT).

2. The same reasoning applies, mutatis mutandis, to the subject-matter of the corresponding independent claims 11, 21, 25, 30, 34, 40, 46 and 49, which therefore are also considered new and inventive.
3. Claims 2 to 10, 12 to 20, 22 to 24, 26 to 29, 31 to 33, 35 to 39, 41 to 45, 47, 48 and 50 are dependent on the claims mentioned in points 1 and 2 and as such also meet the requirements of the PCT with respect to novelty and inventive step.
4. Although claims 1, 34 and 11, 21, 40 have been drafted as separate independent claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought and in respect of the terminology used for the features of that subject-matter. The aforementioned claims therefore lack conciseness and as such do not meet the requirements of Article 6 PCT.
5. It is clear from the description on pages 21 and 22 that the following features are essential to the definition of the invention: the packet at the lowest level in the superimposed packets comprises application information for a first user station having the lowest level signal quality in the set and control information for another user station or for other user stations in the set.

Since independent claim 34 and 40 do not contain this feature it does not meet the requirement following from Article 6 PCT taken in combination with Rule 6.3(b) PCT that any independent claim must contain all the technical features essential to the definition of the invention.